

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) An information processing apparatus, comprising:
a storage section storing a plurality of operating systems (OSs);
a first processor that executes processes of the OSs; and
a process manager that:

schedules execution of partitions of the OSs along a time axis, wherein a first OS of the OSs is executing in a current partition.

controls the timing of switching between execution of the partitions in accordance with the schedule, the schedule including a scheduled switch to a second OS of the OSs.

receives an interrupt request having a maximum time that execution of an interrupt associated with the interrupt request can be delayed from receipt of the interrupt request, the interrupt request ~~[[and]]~~ requiring ~~[[an]]~~ the second OS of the OSs ~~other than the OS executing in the current partition to execute the interrupt,~~

determines whether the time to a next the scheduled switch to the ~~required second~~ OS is less than the maximum allowable delay time from receipt of the interrupt request, ~~[[and]]~~

when it is determined that the time to the ~~[[next]]~~ scheduled switch to the second OS is less than the maximum allowable delay time from receipt of the interrupt request, causes the ~~required second~~ OS to execute the interrupt request at the time of the ~~[[next]]~~ scheduled ~~switching~~ switch to the second OS, and

when it is determined that the time to the scheduled switch to the second OS is longer than the maximum allowable delay time from receipt of the interrupt request, causes the second OS to execute the interrupt request by interrupting execution of the current partition.

2. (Cancelled).

3. (Currently Amended) The information processing apparatus according to claim 1, wherein the process manager is further configured to suspended execution of the partitions to execute the interrupt process, when it is determined that the time to the ~~[[next]]~~ earliest scheduled switch is longer than the maximum allowable delay time from the occurrence of the interrupt request.

4. (Previously Presented) The information processing apparatus according to claim 1, further comprising:

a second processor that executes the processes of the OSs in parallel with the first processor,

wherein the process manager is further configured to:

schedule execution of the partitions along the time axis as to the first and second processors such that the first and second processors switch between execution of the partitions in accordance with the schedule,

select a schedule corresponding to the first processor or to the second processor, and

interrupt execution of the partitions by the first processor or the second processor at the time of a scheduled switch between execution of the partitions contained in the selected schedule.

5. (Previously Presented) The information processing apparatus according to claim 4, wherein the process manager is configured to:

select a schedule having the earliest scheduled switch between execution of the partitions after receiving the interrupt request, and

interrupt execution of the partitions at the time of the earliest scheduled switch.

6. (Previously Presented) The information processing apparatus according to claim 1, wherein the process manager is further configured to:

receive a second interrupt request having a minimum allowable execution delay time, and

execution of the partitions at the time of a scheduled switch between execution of the partitions that occurs after the minimum allowable delay time from receipt of the second interrupt request has elapsed.

7. (Previously Presented) The information processing apparatus according to claim 1, wherein the process manager is further configured to:

receive a second interrupt request that is executable during execution of a specific partition,

determine, based on the schedule, when the specific partition will be executed,
and

when the specific partition is being executed, interrupt execution of the specific partition to execute the second interrupt request.

8. (Previously Presented) The information processing apparatus according to claim 1, further comprising:

a second processor that executes the processes of the OSs in parallel with the first processor, and

first and second partition switching modules for respectively controlling the processors to switch between execution of the partitions,

wherein the process manager is further configured to the first and second partition switching modules to cause the processors to execute the partitions in accordance with the schedule.

9. (Previously Presented) The information processing apparatus according to claim 8, further comprising:

a memory storing reservation queues of entries containing information about received interrupt requests, the queues being grouped based on sources from which the interrupt requests originated

wherein the first and second partition switching modules are configured to select, from the reservation queues and based on the grouping, entries corresponding to

interrupt requests originating from sources which can be accommodated by the processors, respectively.

10. (Currently Amended) A method performed by a computer for controlling switching between execution of partitions of a plurality of operating systems (OSs), comprising:

receiving, by one or more processors ~~a processor associated with the computer~~, an interrupt processing request when a first OS of the OSs is executing in a current partition,

determining, by the one or more processors ~~processor~~, whether the interrupt processing request has a maximum time that execution of an interrupt associated with the interrupt request can be delayed from receipt of the interrupt request and requires ~~an OS other than the OS executing in the current partition~~ a second OS of the OSs to execute the interrupt,

receiving, by the one or more processors ~~processor~~, a schedule of execution of the partitions including a scheduled switch to the second OS,

determining, by the processor, whether the time to ~~a next~~ the scheduled switch to the ~~required~~ second OS is less than the maximum allowable delay time from receipt of the interrupt request,

when it is determined that when the time to the next scheduled switch is less than the maximum allowable delay time, scheduling, by the one or more processors ~~processor~~, execution of the interrupt processing request for the ~~the~~ [[next]] scheduled ~~switching~~ switch to the second OS, and

when it is determined that the time to the scheduled switch to the second OS is longer than the maximum allowable delay time from receipt of the interrupt request, interrupting, by the one or more processors, causing the second OS to execute the interrupt request by interrupting execution of the current partition ~~causing, by the processor, the required OS to execute the interrupt process at the time of the next scheduled switch.~~

11. (Canceled).

12. (Currently Amended) The method according to claim 10, further comprising:
when it is determined that the time to the ~~[[next]]~~ earliest scheduled switch is longer than the maximum allowable delay time from receipt of the interrupt processing request, suspending, by the processor, execution of the partitions to execute the a partition interrupt processing request.

13. (Previously Presented) The method according to claim 10, further comprising:
scheduling, by the processor, execution of the partitions along a time axis as to a plurality of processors that execute the partitions of the OSs, such that the processors switch between execution of the partitions in accordance with the schedule,
selecting, by the processor, a schedule corresponding to one of the processors,
and

interrupting, by the processor, execution of the partitions by the processor
corresponding to the selected schedule to execute the interrupt processing request.

14. (Previously Presented) The method according to claim 13, wherein
interrupting execution includes selecting, by the processor, a schedule having an
earliest scheduled switch between execution of the partitions after receipt of the
interrupt request, and executing, by the processor, the interrupt processing request at
the time of the earliest scheduled switch.

15. (Previously Presented) The method according to claim 10, further
comprising:

receiving, by the processor, a second processing interrupt request having a
minimum allowable execution delay time,

scheduling, by the processor, execution of the second interrupt processing
request at the time of a scheduled switch between execution of the partitions that
occurs after the minimum allowable delay time has elapsed.

16. (Previously Presented) The method according to claim 10, further
comprising:

receiving, by the processor, a second interrupt processing request that is
executable during execution of a specific partition,

determining, by the processor and based on the schedule, when the specific
partition will be executed, and

when the specific partition is being executed, interrupting, by the processor, execution of the specific partition to execute the second interrupt processing request.

17. (Currently Amended) A computer-readable storage medium storing a computer program which, when executed by an information processing apparatus, causes the information processing apparatus to perform a method for controlling switching between execution of partitions of a plurality of operating systems (OSs), the method comprising:

receiving, by one or more processors ~~a processor associated with the computer~~, an interrupt processing request when a first OS of the OSs is executing in a current partition,

determining, by the one or more processors ~~processor~~, whether the interrupt processing request has a maximum time that execution of an interrupt associated with the interrupt request can be delayed from receipt of the interrupt request and requires ~~an OS other than the OS executing in the current partition~~ a second OS of the OSs to execute the interrupt,

receiving, by the one or more processors ~~processor~~, a schedule of execution of the partitions including a scheduled switch to the second OS,

determining, by the processor, whether the time to ~~a next~~ the scheduled switch to the required second OS is less than the maximum allowable delay time from receipt of the interrupt request,

when it is determined that when the time to the next scheduled switch is less than the maximum allowable delay time, scheduling, by the one or more processors

~~processor~~, execution of the interrupt processing request for the ~~[[next]]~~ scheduled
~~switching~~ switch to the second OS, and

when it is determined that the time to the scheduled switch to the second OS is
longer than the maximum allowable delay time from receipt of the interrupt request,
causing, by the one or more processors, the second OS to execute the interrupt request
by interrupting execution of the current partition ~~causing, by the processor, the required~~
~~OS to execute the interrupt process at the time of the next scheduled switch.~~